
The Emissions Gap Report 2016

Chapter 2: Pre-2020 trends and progress towards achieving the 2020 pledges

Chapter 3: 2030 trends and ambition. What contributions do the INDCs make towards the 1.5°C and 2°C target?
Understanding the mitigation efforts of the INDCs

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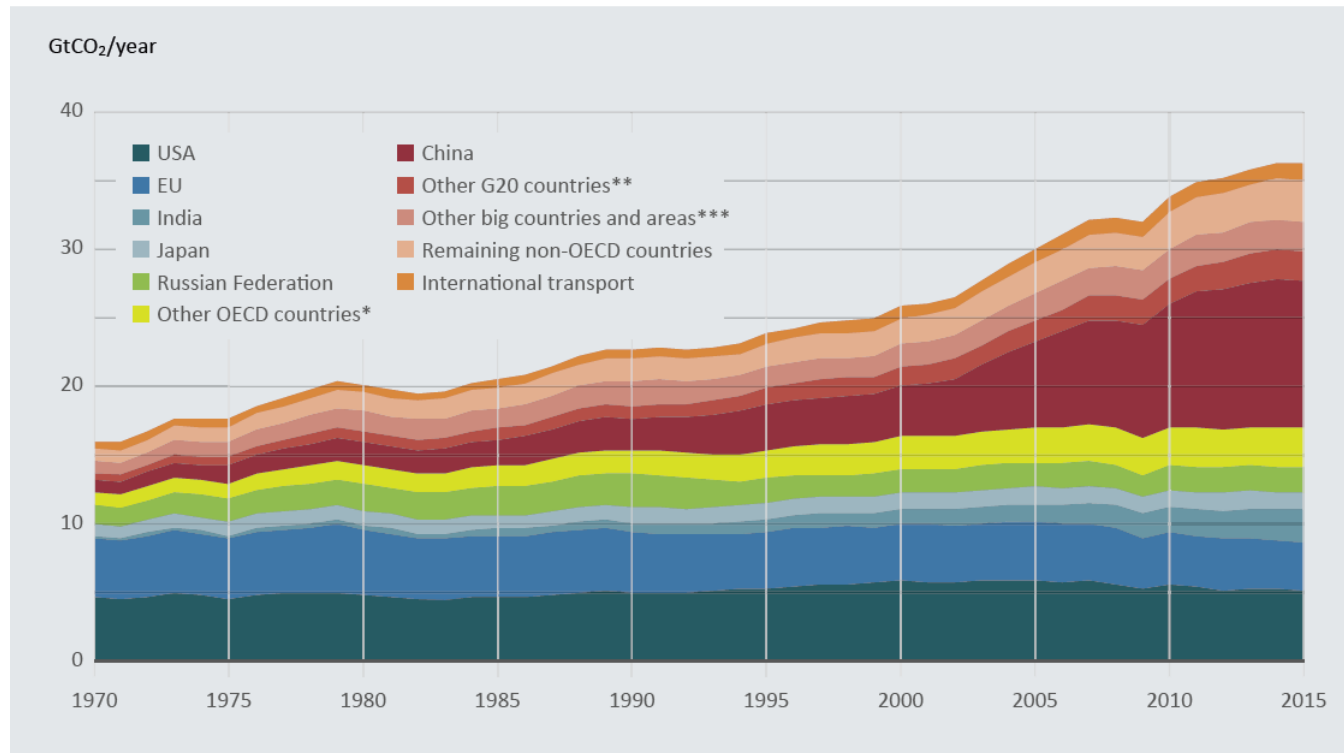
ECF Brussels ♦ 25 October, 2016



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Global CO₂ emissions from fossil fuel and industry seem to stabilize



* Other OECD countries include Australia; Canada; Mexico; Republic of Korea and Turkey.

** Other G20 countries include Argentina; Brazil; Indonesia; Saudi Arabia; South Africa and Turkey.

*** Other big countries and areas include Egypt; Iran; Kazakhstan; Malaysia; Nigeria; Taiwan, Province of China; Thailand and Ukraine.

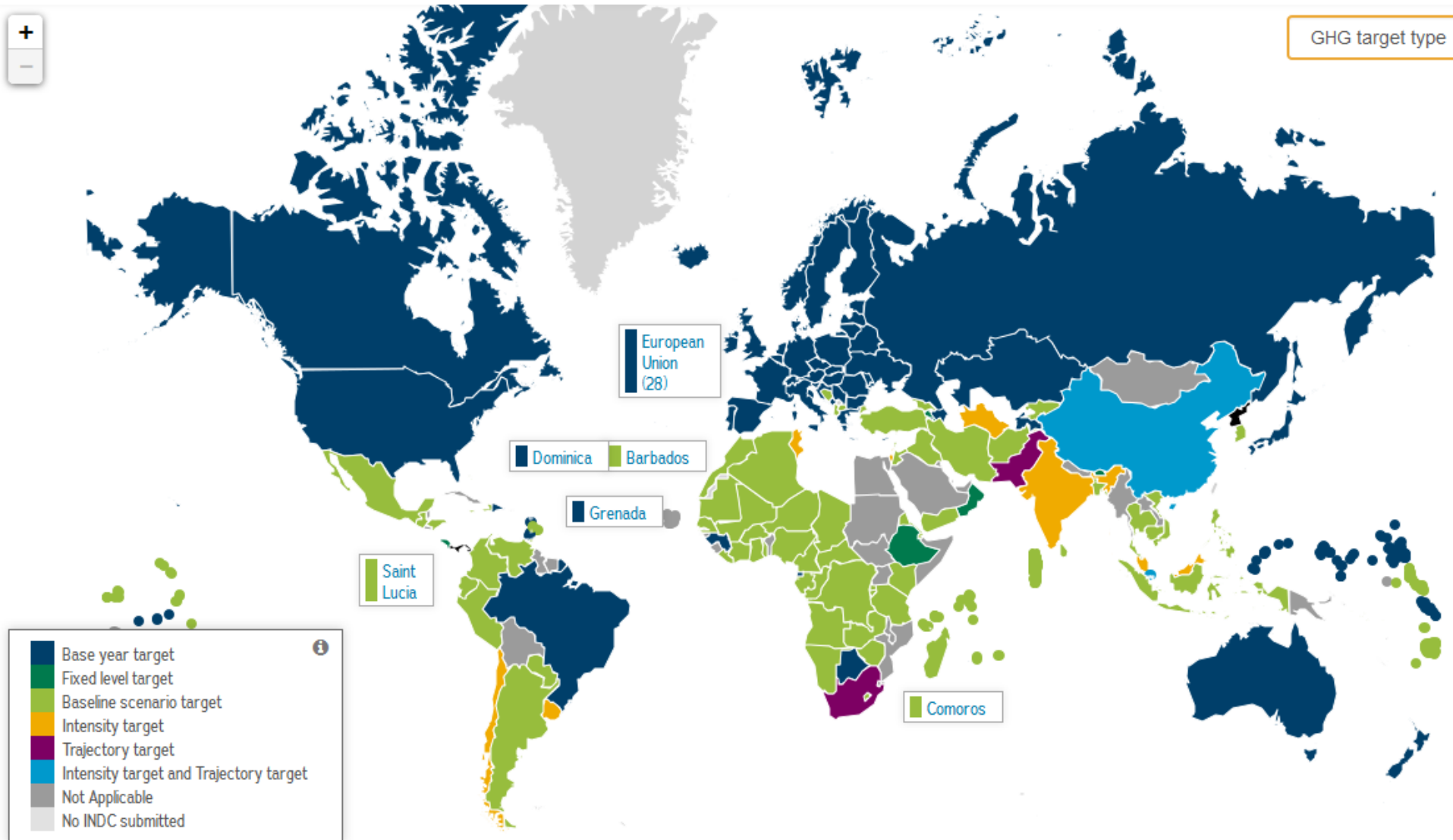
Source: JRC/PBL, 2016

Progress towards achieving the 2020 pledges for the G20 members



- Collectively, G20 members are on a likely track to meet the minimum level of the Cancun pledges.
- China, India and the EU are on track to meet the 2020 pledges; Brazil, Japan, and Russia are also on track according to most estimates.
- Canada, Mexico, Republic of Korea and the United States are likely to require further action and/or purchased offsets in order to meet their 2020 pledges.
- For South Africa, Indonesia information is insufficient to assess Cancun pledge alignment. For Australia no conclusion is drawn regarding pledge attainment.

INDC submissions by type of mitigation target, by 1st October 2016



Ten independent studies, including UNFCCC synthesis report



Reference	Sector and gas coverage	Cut-Off Date Analysis INDCs	Scenario coverage	Unconditional INDC case	Conditional INDC case
Climate Action Tracker (CAT, 2015)	All	8 Dec. 2015 (Update)	Current policy trajectory, INDC	X	X
Climate & Energy College / University of Melbourne dataset (Meinshausen, 2015)	All	15 Dec. 2015 (Update)	INDC	X	X
Climate Interactive (2015)	All	20 Oct. 2015	INDC	X	—
Danish Energy Agency (DEA, 2015)	All	1 Dec. 2015 (Update)	INDC	X	—
London School of Economics and Political Science (LSE) (Boyd et al., 2015)	All	Mid-Oct. 2015	INDC	X	X
International Energy Agency - World Energy Outlook (IEA, 2015)	All ^a	15 Dec. 2015 (Update)	Current policy trajectory, INDC	X	—
Joint Research Centre (JRC) (Kitous and Keramidas, 2015) (NEW STUDY)	All	Mid-Oct. 2015	INDC	X	X
Pacific Northwest National Laboratory (Fawcett et al., 2015) (NEW STUDY)	All	Mid-Oct. 2015	INDC	X	—
PBL Netherlands Environmental Assessment Agency (den Elzen et al., 2016)	All	15 Dec. 2015 (Update)	Current policy trajectory, INDC	X	X
UNFCCC Synthesis Report (UNFCCC, 2016a) (NEW STUDY)	All	4 April 2016	INDC	X	X

INDCs assessed dependent on the underlying global analysis

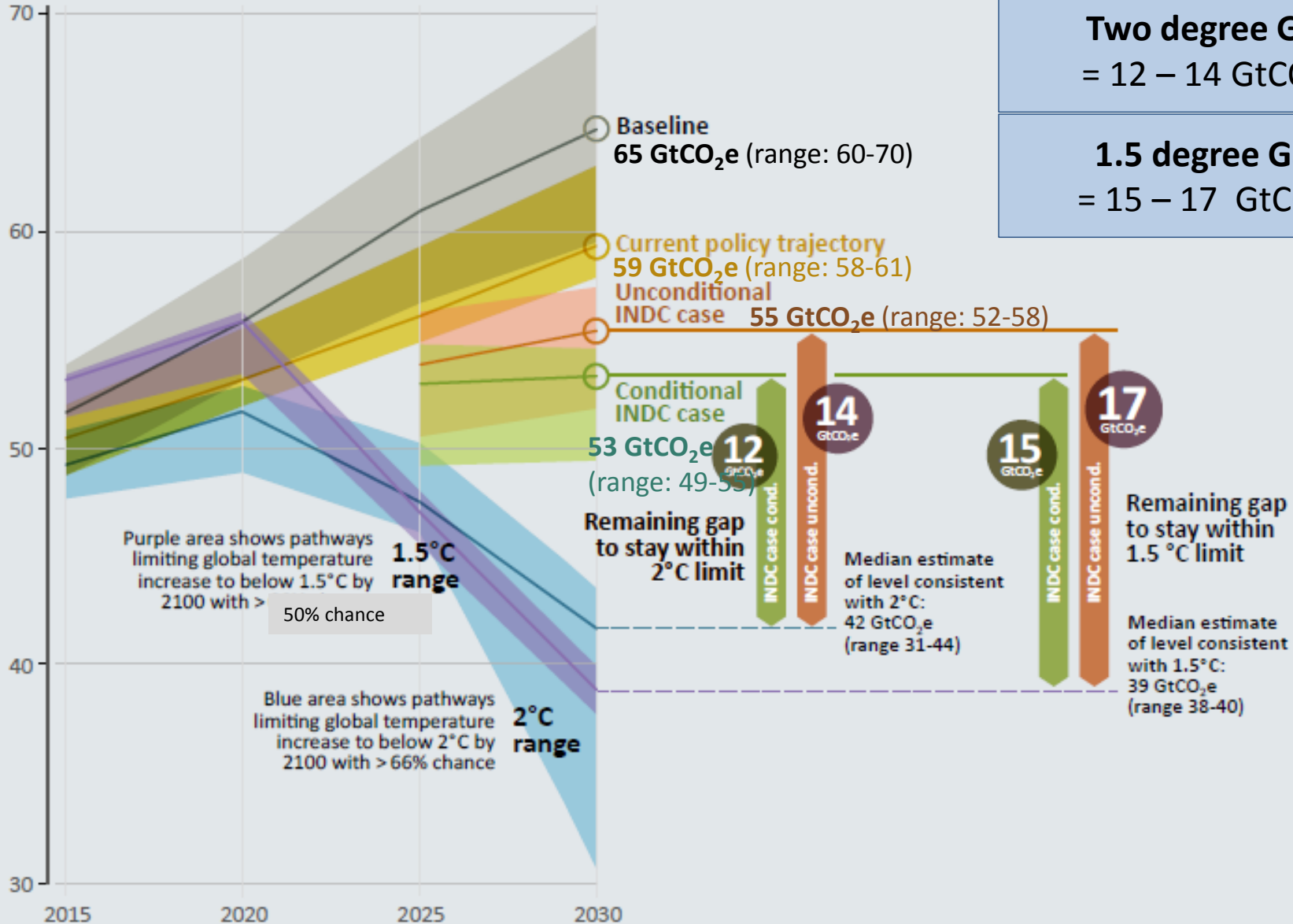


- 119 to 160 INDCs assessed
- 146 to 187 countries represented
- 88-96% of 2012 global emissions

INDC contributions and the emissions gap



Annual Global Total Greenhouse Gas Emissions (GtCO₂e)



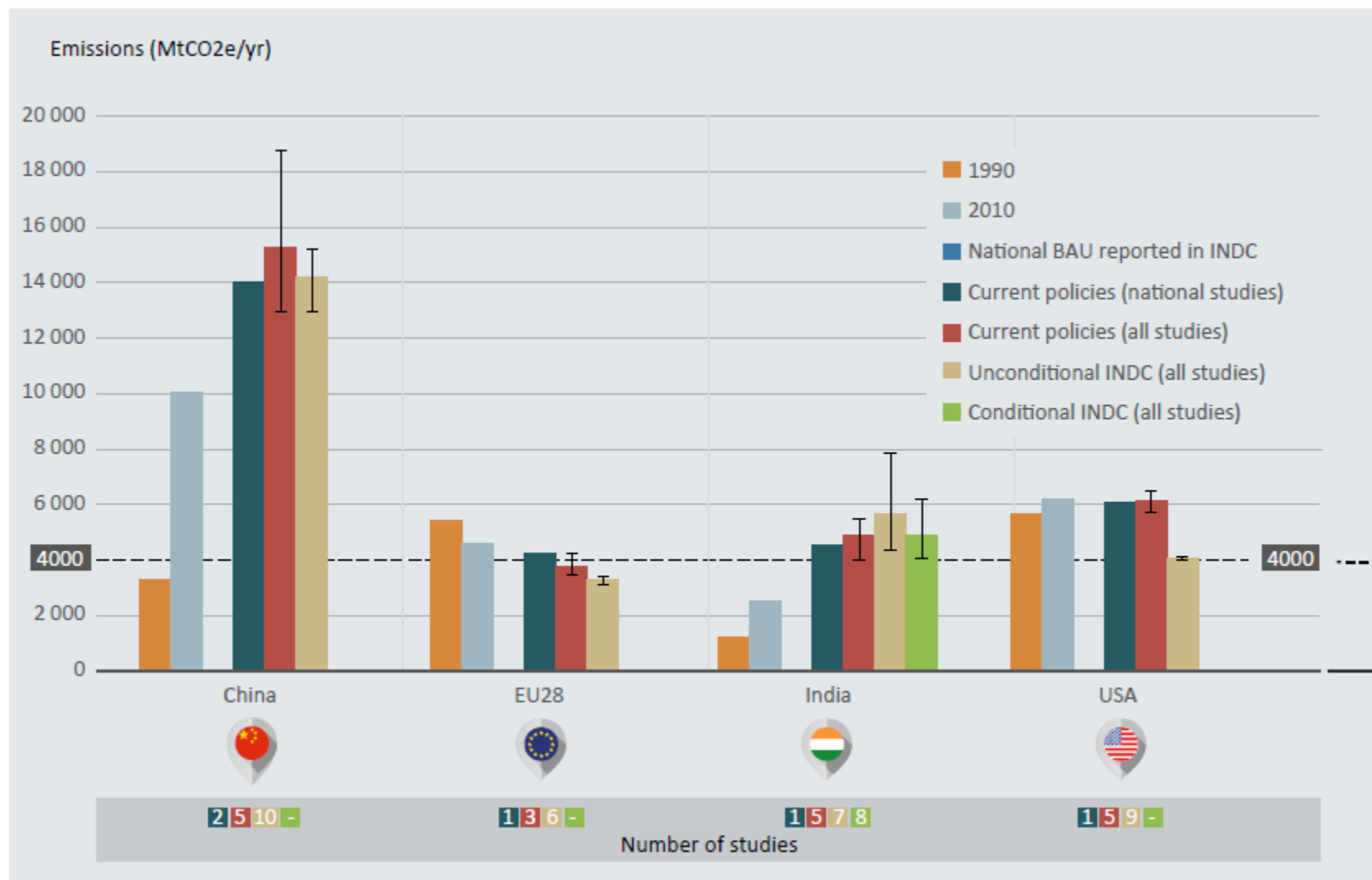
Two degree Gap
= 12 – 14 GtCO₂e

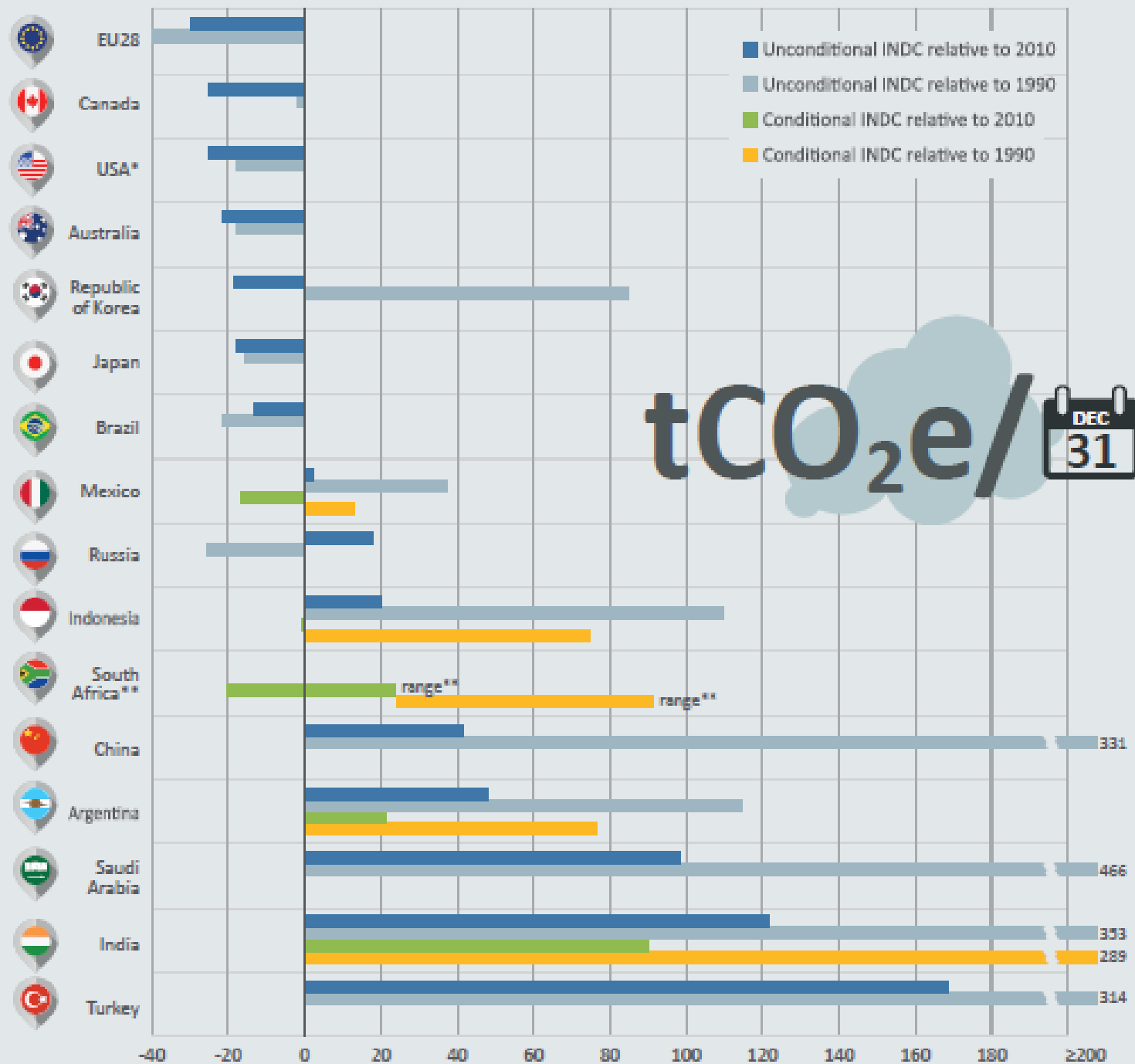
1.5 degree Gap
= 15 – 17 GtCO₂e

Understanding the mitigation efforts of the INDCs: country-level

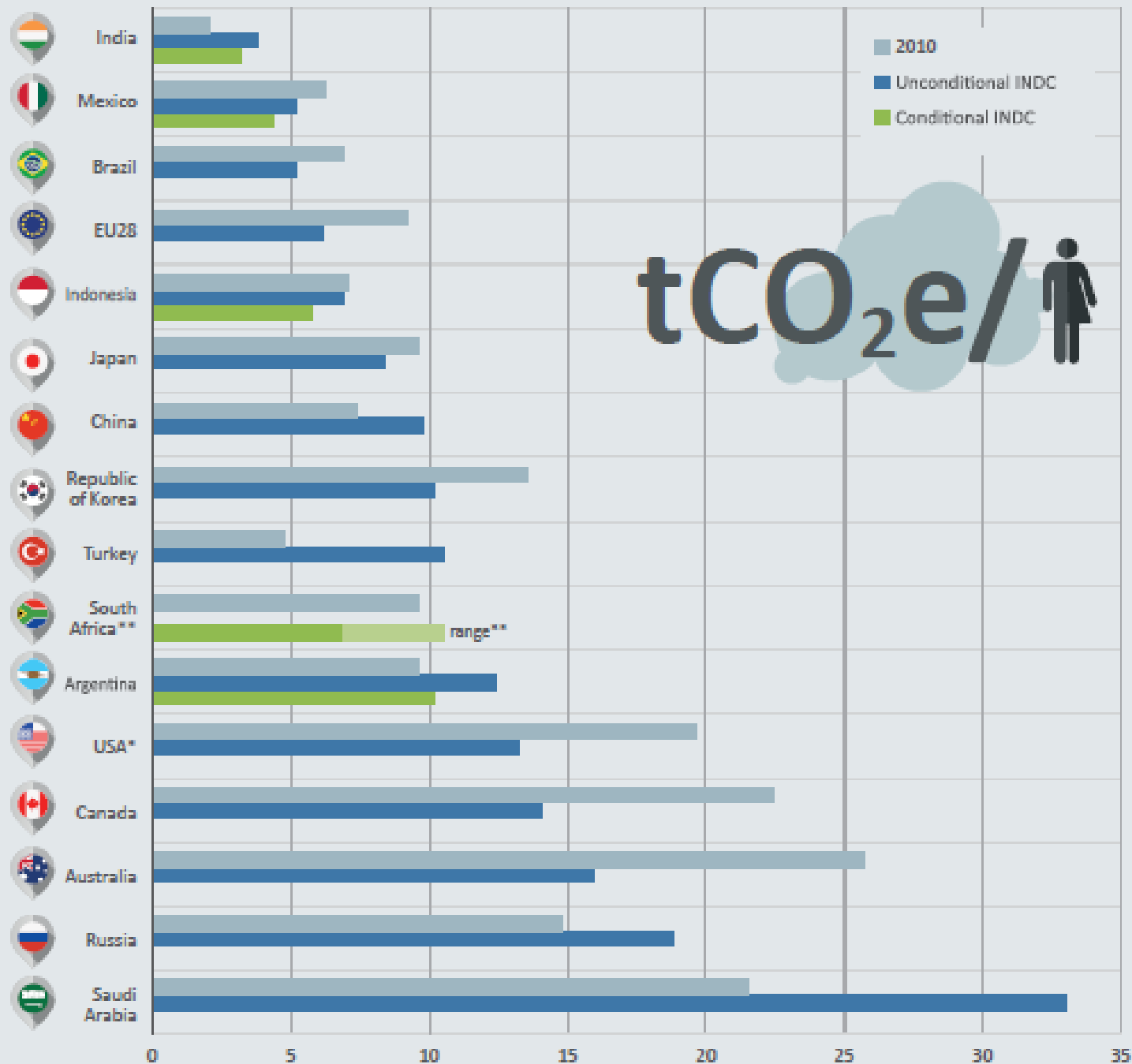


GHG emissions under the INDC, current policies & BAU scenario for G20 countries in 2030





Countries ranked to Emissions relative to 2010, with EU, Canada and US the highest reductions, and India and Turkey the highest increase compared to 2010 levels



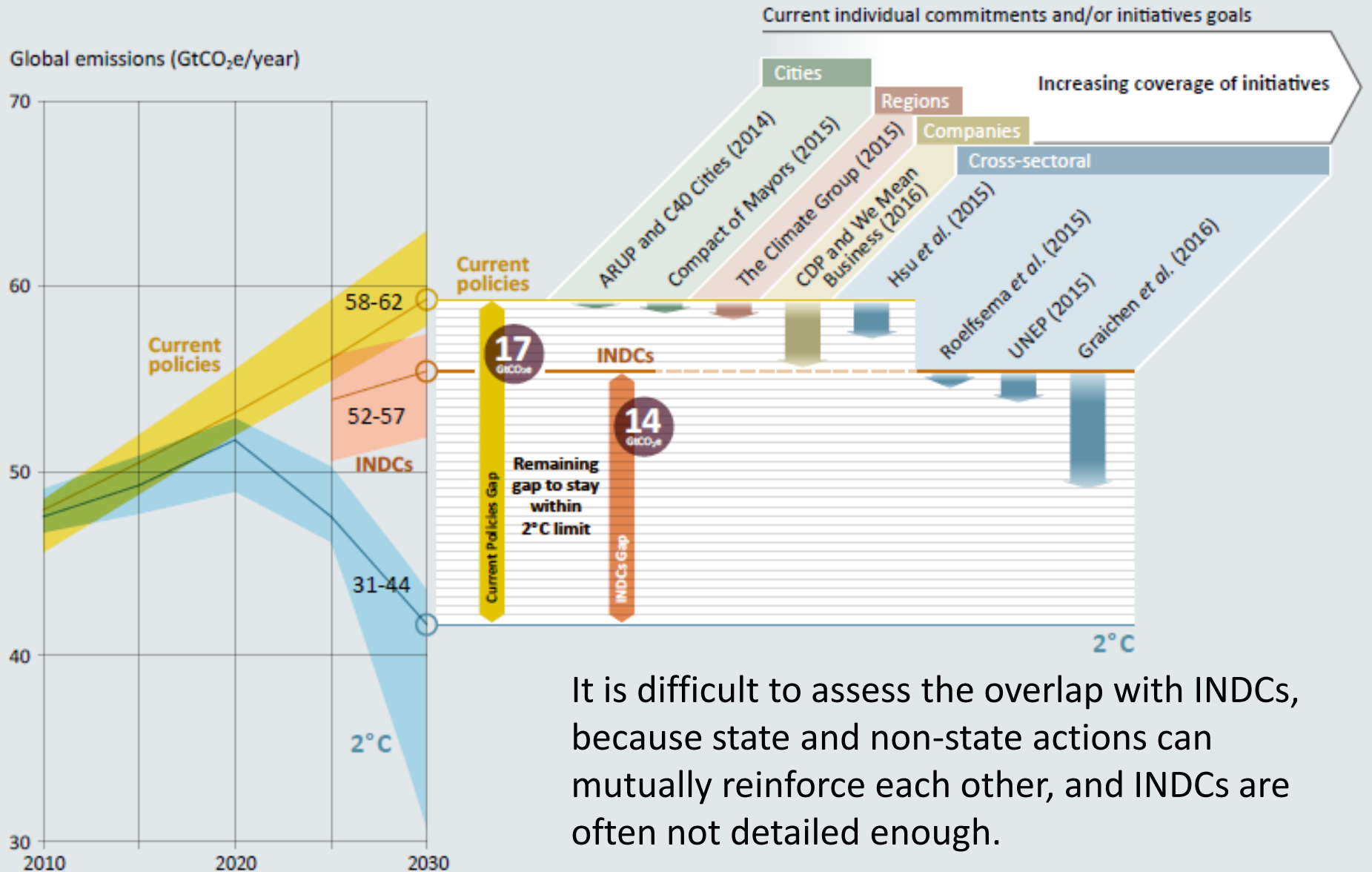
Countries ranked to per capita emissions in 2030, with the low estimates for India, Mexico, Brazil, and high values for the US, Canada. The highest estimates for Russia and Saudi Arabia

What will be the contribution of INDCs to the temperature target?



- Even if fully implemented, the unconditional INDCs are only consistent with staying below an increase in temperature of 3.2°C (2.9 – 3.4) by 2100 with greater than 66 per cent probability, and 3.0°C, if conditional INDCs are included.
- This is lower than the 3.6 °C (3.4 – 3.7) under the current policies.
- INDC estimates have uncertainty ranges associated with them.

Non-state actions will likely reduce emissions with a few gigatons below the INDCs



It is difficult to assess the overlap with INDCs, because state and non-state actions can mutually reinforce each other, and INDCs are often not detailed enough.

Action on energy efficiency can help close the gap



- Ambitious action on energy efficiency becomes more urgent given that the long-term objectives in the Paris Agreement are more stringent.
- Well-documented opportunities exist to strengthen national policies and deliver deeper reductions through more effective delivery of energy efficiency policies.
- The estimates of direct and indirect emissions reduction potentials in 2030 are 5.9 GtCO₂e for buildings, 4.1 for industry and 2.1 for transport.

Buildings

- Energy codes
- Information and energy performance certification
- Highly energy efficient buildings

Industry

- Energy Management, ISO 50001 and Energy Performance Monitoring
- Energy performance standards for industrial equipment
- Energy service companies

Transport

- Vehicle Fuel Economy Standards
- Electric Mobility for Passenger Transport
- Sustainable Logistics/Freight Transportation

SDG's and climate change

- The Paris Agreement defines the Sustainable Development Goal (SDG13) on climate change.
- Making the right choices in implementing all goals will be crucial to achieving the Paris Agreement objectives and the 2030 Agenda for Sustainable Development.
- *Aligned*: Sustainable energy access, sustainable cities, sustainable consumption and production, terrestrial ecosystems.
- *Path-dependent*: hunger and food security, growth and employment, infrastructure, industrialisation and innovation.

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Thank you

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